

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): M.K. Brown et al.

Case: 19-26

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Group: 2157

Examiner: Ramy M. Osman

Title: Content Interpolating Web Proxy Server

APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants (hereinafter "Appellants") hereby appeal the final rejection dated December 29, 2005 of claims 1-7 and 9-20 of the above-identified application.

REAL PARTY IN INTEREST

The present application is assigned to Lucent Technologies Inc., as evidenced by an assignment recorded July 20, 2000 in the U.S. Patent and Trademark Office at Reel 010993, Frame 0591. The assignee Lucent Technologies Inc. is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences.

STATUS OF CLAIMS

The present application was filed on July 20, 2000 with claims 1-20. Claim 8 was canceled in an Amendment filed December 4, 2003. Claims 1-7 and 9-20 are currently pending in the application. Claims 1, 13, 14 and 16-20 are the independent claims.

Each of claims 1-7 and 9-20 stands rejected under 35 U.S.C. §102(e) or §103(a). Claims 1-7 and 9-20 are appealed.

STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is directed to an apparatus for use in a computer network. The apparatus includes at least one server within the network, with the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. The claim further specifies that the server parses the retrieved web content into one or more component structures, and subsequently applies a pattern matching process to recognize designated component structure subject to alteration in accordance with the one or more augmentation files. In addition, the claim recites that the pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

An illustrative embodiment of the claimed arrangement is shown as proxy server 102 in system 100 of FIG. 1. The proxy server 102 is coupled between a client device 110 and a web server 215 as shown in FIG. 2. The proxy server processes client requests and applies pattern matching to determine appropriate alteration of web content retrieved responsive to the request. See the specification at, for example, page 5, lines 7-14, and page 7, lines 10-26.

Independent claim 13 is directed to an apparatus for use in a computer network. The apparatus comprises at least one server within the network, with the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. The claim further recites that the client device comprises a virtual client device having a combination of a plurality of different sets of features provided by multiple distinct physical client devices.

An illustrative embodiment of the claimed arrangement is shown as proxy server 102 in system 100 of FIG. 1. The proxy server 102 can interact with a client device 110 that is designated as a virtual client device. Such a client device may be a device which is designated as having a device type representative of a combination of different sets of features provided by multiple distinct physical devices. See the specification at, for example, page 5, lines 7-14, page 7, lines 10-26, and page 11, lines 8-20.

Independent claim 14 is directed to an apparatus for use in a computer network. The apparatus comprises at least one server within the network, with the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. The claim further specifies that the server processes the client requests such that the request appears to originate from a virtual client device having a combination of a plurality of different sets of features provided by multiple distinct physical client devices.

An illustrative embodiment of the claimed arrangement is shown as proxy server 102 in system 100 of FIG. 1. The proxy server 102 can interact with a client device 110 that is designated as a virtual client device. Such a client device may be a device which is designated as having a device type representative of a combination of different sets of features provided by multiple distinct

physical devices. See the specification at, for example, page 5, lines 7-14, page 7, lines 10-26 and page 11, lines 8-20.

Independent claim 16 is directed to an apparatus for use in a computer network. The apparatus includes at least one server within the network, with the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. The claim further specifies that at least one of the recited augmentation files comprises a default augmentation file stored on the at least one server.

An illustrative embodiment of the claimed arrangement is shown as proxy server 102 in system 100 of FIG. 1. The proxy server 102 is coupled between a client device 110 and a web server 215 as shown in FIG. 2. The proxy server processes client requests and applies pattern matching to determine appropriate alteration of web content retrieved responsive to the request. The augmentation files used in this process include at least one default augmentation file, which may be a default patch file as shown in step 318 of the flow diagram of FIG. 3. See the specification at, for example, page 5, lines 7-14, page 7, lines 10-26, and page 12, lines 8-15.

Independent claim 17 is directed to an apparatus for use in a computer network. The apparatus includes at least one server within the network, with the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. In addition, the server has access to a set of one or more default augmentation files, and the server is operative to attempt to retrieve a given one of the default augmentation files for use in altering the retrieved web content if the corresponding client request is determined to have no externally-retrievable augmentation files associated therewith.

An illustrative embodiment of the claimed arrangement is shown as proxy server 102 in system 100 of FIG. 1. The proxy server 102 is coupled between a client device 110 and a web server 215 as shown in FIG. 2. The proxy server processes client requests and applies pattern matching to determine appropriate alteration of web content retrieved responsive to the request. The augmentation files used in this process include at least one default augmentation file, which may be a default patch file as shown in step 318 of the flow diagram of FIG. 3. See the specification at, for example, page 5, lines 7-14, page 7, lines 10-26, and page 12, lines 8-15.

Independent claim 18 is directed to a method for use in a computer network. The method includes the steps of processing a client request generated by a client device to determine a particular client type associated with the client device, retrieving web content identified in the client request, retrieving one or more augmentation files associated with the web content and the particular client type, and altering the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. The claim further recites that the retrieved web content is parsed into one or more component structures, and a pattern matching process is subsequently applied to recognize designated component structure subject to alteration in accordance with the one or more augmentation files. The pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

An illustrative embodiment of the claimed arrangement involves processing operations implemented by proxy server 102 in system 100 of FIG. 1. The proxy server 102 is coupled between a client device 110 and a web server 215 as shown in FIG. 2. The proxy server processes client requests and applies pattern matching to determine appropriate alteration of web content retrieved responsive to the request. See the specification at, for example, page 5, lines 7-14, and page 7, lines 10-26. The flow diagram of FIG. 3 shows an example of the claimed arrangement in which the augmentation files are referred to as patch files. See the specification at page 11, line 21, to page 12, line 15.

Independent claim 19 is directed to a machine-readable medium for storing one or more programs for use in a computer network. The one or more programs when executed by a processing system carry out steps similar to those of the method of claim 18.

An illustrative embodiment of the claimed arrangement comprises a memory or other machine-readable medium associated with the proxy server 102 in system 100 of FIG. 1. The proxy server 102 is coupled between a client device 110 and a web server 215 as shown in FIG. 2. The proxy server processes client requests and applies pattern matching to determine appropriate alteration of web content retrieved responsive to the request. See the specification at, for example, page 4, lines 3-6, page 5, lines 7-14, and page 7, lines 10-26.

Independent claim 20 is directed to a processing system that comprises a web server operative to store web content, and an interpolating proxy server at least temporarily coupled to the web server and operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request and stored on the web server, to retrieve one or more augmentation files associated with the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. The claim further recites that the interpolating proxy server is operative to parse the retrieved web content into one or more component structures, and subsequently to apply a pattern matching process to recognize designated component structure subject to alteration in accordance with the one or more augmentation files. The pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

An illustrative embodiment of the claimed arrangement is shown as processing system 100 in FIG. 1. The proxy server 102 of the processing system 100 is coupled between a client device 110 and a web server 215 as shown in FIG. 2. The proxy server 102 processes client requests and applies pattern matching to determine appropriate alteration of web content retrieved responsive to the request. See the specification at, for example, page 5, lines 7-14, and page 7, lines 10-26.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-5, 7, 9, 12-14 and 16-19 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,626,958 (hereinafter “McCauley”).
2. Claims 6, 15 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over McCauley in view of U.S. Patent No. 6,421,733 (hereinafter “Tso”).

3. Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over McCauley in view of U.S. Patent No. 6,345,279 (hereinafter “Li”).

ARGUMENT

1. Rejection of Claims 1-5, 7, 9, 12-14 and 16-19 under §102(e)

Claims 1-3, 18 and 19

The Manual of Patent Examining Procedure (MPEP), Eight Edition, August 2001, §2131, specifies that a given claim is anticipated “only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference,” citing Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, MPEP §2131 indicates that the cited reference must show the “identical invention . . . in as complete detail as is contained in the . . . claim,” citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). For the reasons identified below, Appellants submit that the Examiner has failed to establish anticipation of claims 1-4, 6 and 9 by the McCauley reference.

As indicated above, independent claim 1 is directed to an apparatus for use in a computer network. The apparatus comprises at least one server within the network, the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device. The claim also specifies that the server parses the retrieved web content into one or more component structures, and subsequently applies a pattern matching process to recognize designated component structure subject to alteration in accordance with the one or more augmentation files.

Thus, the claim calls for a server that retrieves not only web content, but also one or more augmentation files associated with at least one of the web content and the particular client type. Furthermore, the claimed server, subsequent to parsing of the retrieved web content into component structures, applies the pattern matching process to recognize designated component structure subject to alteration in accordance with the one or more augmentation files.

The claim further recites that the pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

The McCauley reference fails to meet the above-noted limitations of claim 1, and in fact teaches away from the claim limitations.

The Examiner apparently argues that the claimed server is met by the information server system 12 of FIG. 1, and more particularly relies on the disclosure in column 5, lines 1-10 and 19-30, column 6, lines 1-45, column 7, lines 20-31 and 61-67, and column 8, lines 5-20. See the final Office Action at pages 4-5, section 11. However, the relied-upon portions fail to disclose a server that operates in the manner claimed.

For example, there is no reference in the relied-upon portions of McCauley regarding a server which, subsequent to parsing of the retrieved web content into component structures, applies a pattern matching process to recognize designated component structure subject to alteration in accordance with the one or more augmentation files. Instead, McCauley at column 6, lines 17-45, provides as follows, with emphasis supplied:

Dispatcher 40 is the supervisory part of server application program 17. In response to a request for an information page, the dispatcher selects and initiates an appropriate page renderer based on which client viewer the requesting client is using.

The various available page renderers are configured to tailor renderings of the information pages specifically for the individual requesting clients, in response to characteristics of the clients such as display and communication characteristics. For example, an HTML page renderer decides whether to use frames or tables based on the browser capabilities of the client. As another example, the HTML page renderer controls the visual formatting and layout of page renderings on client computers through its selection of pane renderers, as will be more fully described below. The page renderer, in conjunction with the selected pane renderers, emits instructions for individual clients in accordance with the tailored renderings of the information pages.

Every page renderer reads and uses a page specification to decide how to render an information page. An individual information page has only a single page specification,

which is used by any page renderer attempting to render the information page. Each page specification includes pane specifications for individual panes within the information page. A pane, as used herein, is an individual portion, area, or sub-division of an information page. A page is made up of one or more panes, and all page information is presented within one of such panes.

Thus, the dispatcher 40 of the server application program 17 simply determines page renderers based on browser capabilities or other characteristics of the requesting clients. There is no teaching or suggestion regarding the claimed application of a pattern matching process to recognize designated component structure subject to alteration in accordance with one or more augmentation files. In fact, the use of page renderers that are selected and applied based on client characteristics as described in McCauley is a direct teaching away from the claimed invention, since it is performed in a manner which does not require application of a pattern matching process subsequent to parsing of retrieved web content into one or more component structures.

Appellants further note that the terms “pattern” or “matching” apparently do not appear anywhere in the text of the McCauley reference. It is difficult to imagine how a reference that mentions neither patterns nor matching could be viewed as anticipatory of a claim which includes explicit pattern matching limitations.

Accordingly, since McCauley fails to meet each and every limitation of claim 1, claim 1 is not anticipated by McCauley.

Dependent claims 2 and 3 are believed allowable for at least the reasons identified above with regard to claim 1.

Independent claims 18 and 19 each include limitations similar to claim 1, and are believed allowable for substantially the same reasons that claim 1 is believed allowable.

Claim 4

Dependent claim 4 further recites that one or more of the augmentation files are co-located with the web content at a site remote from the server. In the illustrative embodiment of FIG. 2, it can be seen that such augmentation files are stored as patch files 230 and 232 in association with the corresponding content files 220 and 222 at a site associated with web server 215 and remote from

proxy server 102. The Examiner argues that the limitations of claim 4 are shown in McCauley at column 3, lines 39-53. See the final Office Action at page 5, section 14. Appellants respectfully disagree. The relied-upon portion of McCauley indicates that mass storage device 18 of FIG. 1 can be located “either locally or remotely” but fails to indicate that augmentation files are co-located with web content at a site remote from that of the server that is positively recited in the claim. In the arrangement shown in FIG. 1 of McCauley, and relied upon by the Examiner, there appears to be only a single server 12. Accordingly, it is believed that the limitations of claim 4 are not anticipated by McCauley.

Claim 5

Dependent claim 5 further recites that at least one of the augmentation files comprises a patch file. The Examiner argues that the limitations of claim 5 are shown in McCauley at column 6, lines 1-30, and column 7, lines 20-40. See the final Office Action at page 5, section 15. Appellants respectfully disagree. The relied-upon portions of McCauley refer generally to page renderers and pane renderers, but fail to teach or suggest patch files as recited. Accordingly, it is believed that the limitations of claim 5 are not anticipated by McCauley.

Claim 7

Dependent claim 7 further recites that the server determines the client type using at least one of an HTTP header element, a client-identifying cookie, and an HTTP GET request QUERY_STRING attribute. The Examiner argues that the limitations of claim 7 are shown in McCauley at column 4, line 66, to column 5, line 5. See the final Office Action at page 5, section 16. Appellants respectfully disagree. The relied-upon portion of McCauley states that a request for an information page by a particular client “is performed in accordance with HTTP.” This fails to meet the limitations in question, which indicate that the server determines the client type using at least one of the listed elements. Accordingly, it is believed that the limitations of claim 7 are not anticipated by McCauley.

Claim 9

Dependent claim 9 further recites that the pattern matching process utilizes a pattern matching expression comprising context, pattern, precedence and replacement elements. An illustrative embodiment is described in the specification at page 7, line 24, to page 8, line 2. The Examiner argues that the limitations of claim 9 are shown in McCauley at column 6, lines 25-50, and column 8, lines 5-45. See the final Office Action at page 5, section 17. Appellants respectfully disagree. The relied-upon portion of McCauley fails to disclose make any arrangement involving a pattern matching expression comprising context, pattern, precedence and replacement elements. Accordingly, it is believed that the limitations of claim 9 are not anticipated by McCauley.

Claim 12

Dependent claim 12 further recites that the received client request is associated with a plurality of different client devices, and the retrieved augmentation files comprise one or more augmentation files for each of the plurality of different client devices. The Examiner relies on the teachings in McCauley at column 3, lines 39-53, column 4, lines 20-50, and column 12, lines 44-60. See the final Office Action at page 6, section 18. However, the relied-upon portions simply make reference to multiple client devices. There is no teaching or suggestion regarding a single received client request that is associated with a plurality of different client devices, as required by the limitations of the claim at issue. Accordingly, it is believed that the limitations of claim 12 are not anticipated by McCauley.

Claim 13

Independent claim 13 calls for a virtual client device having a combination of a plurality of different sets of features provided by multiple distinct physical client devices. An illustrative example of such an arrangement is described in the present specification at page 11, lines 17-20. This example involves providing a user with an ability to designate a “virtual client” type that does not correspond to any actual single physical device but instead combines the features of multiple distinct physical devices. In formulating the §102(e) rejection of claim 13 over McCauley, the Examiner relies on column 2, lines 1-20, and column 4, lines 20-32, of McCauley. See the final Office Action at page 6, section 19. The Examiner characterizes these portions of McCauley as

teaching “client devices with various features.” However, this is not what is claimed. What is claimed is a virtual client device, not multiple physical client devices. Thus, the claim at issue refers to a single virtual device that has features provided by different distinct physical devices. The McCauley reference fails to teach or suggest the limitations relating to the recited virtual client device.

Claim 14

Independent claim 14 calls for a server processing a client request such that the request appears to originate from a virtual client device having a combination of a plurality of different sets of features provided by multiple distinct physical client devices. An illustrative example of such an arrangement is described in the present specification at page 11, lines 17-20. This example involves providing a user with an ability to designate a “virtual client” type that does not correspond to any actual single physical device but instead combines the features of multiple distinct physical devices. In formulating the §102(e) rejection of claim 14 over McCauley, the Examiner relies on column 2, lines 1-20, and column 4, lines 20-32, of McCauley. See the final Office Action at page 7, section 20. The Examiner characterizes these portions of McCauley as teaching “client devices with various features.” However, this is not what is claimed. What is claimed is a virtual client device, not multiple physical client devices. Thus, the claim at issue refers to a single virtual device that has features provided by different distinct physical devices. The McCauley reference fails to teach or suggest the limitations relating to the recited virtual client device.

Claim 16

Independent claim 16 includes, among other limitations, a limitation relating to a default augmentation file. In an illustrative embodiment, the default augmentation file is a default patch file that is applied by the proxy server 102, as shown in steps 318 and 320 of the flow diagram of FIG. 3. Such a patch file may comprise a patch file 230 or 232 that is retrieved by the proxy server 102 from web server 215 as indicated in FIG. 2. The Examiner relies on the teachings in column 11, lines 45-67 of McCauley relating to pane renderers 44. See the final Office Action at pages 7-8, section 21. Although FIG. 3 utilizes the phrase “default content pane renderer,” the corresponding description at column 7, lines 12-14, indicates that “each pane renderer renders a respective

individual pane in a particular format in conjunction with a particular client viewer.” This teaching appears to be contrary to the limitations of claim 16. It is therefore believed that the relied-upon teachings from McCauley are inconsistent at best, and thus insufficient to support anticipation of the limitations at issue.

Claim 17

Independent claim 17 also refers to one or more augmentation files, but further recites a determination as to whether or not a particular client request has any externally-retrievable augmentation files associated therewith. More particularly, the claim recites that the server has access to a set of one or more default augmentation files, and the server is operative to attempt to retrieve a given one of the default augmentation files for use in altering the retrieved web content if the corresponding client request is determined to have no externally-retrievable augmentation files associated therewith. The Examiner again relies on the teachings in column 11, lines 45-67 of McCauley relating to pane renderers 44. See the final Office Action at pages 7-8, section 21. As mentioned above, although FIG. 3 utilizes the phrase “default content pane renderer,” the corresponding description at column 7, lines 12-14, indicates that “each pane renderer renders a respective individual pane in a particular format in conjunction with a particular client viewer.” There is no teaching or suggestion in this portion or other portions of McCauley regarding the claimed determination regarding the association of particular externally-retrievable augmentation files with a given client request. Accordingly, it is believed that McCauley fails to anticipate the limitations of claim 17.

2. Rejection of Claims 6, 15 and 20 under §103(a)

Claims 6 and 20

Claims 6 and 20 are believed allowable for reasons similar to those identified above with regard to independent claim 1. Dependent claim 6 depends from claim 1, and independent claim 20 includes pattern matching limitations similar to those of claim 1.

Claim 15

Dependent claim 15 further recites that at least one of the augmentation files comprises an externally-retrievable augmentation file retrievable from another server external to the at least one server and having at least a portion of the web content associated therewith. In an illustrative embodiment, the “at least one server” is the proxy server 102 of FIGS. 1 and 2, and the phrase “another server external to the at least one server” refers to the web server 215 of FIG. 2. It can be seen that the web server 215 includes content files 220, 222 and associated augmentation files denoted as patch files 230, 232. These files are retrievable from the web server 215, as indicated in the specification at page 10, lines 22-27.

The Examiner in formulating the §103(a) rejection of claim 15 over McCauley and Tso relies on the teachings in column 3, lines 17-45, of Tso, and element 34 in FIG. 3 of Tso. See the final Office Action at page 8, section 24. However, the collective teachings of the relied-upon portions of Tso and McCauley fail to meet the above-noted limitations relating to an externally-retrievable augmentation file retrievable from another server external to the at least one server and having at least a portion of the web content associated therewith. The McCauley arrangement in FIG. 1 appears to teach a single server 12, and the transcoding server 34 in FIG. 3 of Tso does not appear to be an external source of augmentation files nor is it “associated with” web content in the manner recited in claim 15. Appellants therefore respectfully submit that the proposed combination of McCauley and Tso fails to meet the limitations of claim 15.

3. Rejection of Claims 10 and 11 under §103(a)

Claim 10

Dependent claim 10 is believed allowable at least by virtue of its dependence from claims 1 and 9, for the reasons identified above. The Li reference fails to supplement the fundamental deficiencies of McCauley as applied to claims 1 and 9.

Claim 10 further defines the pattern matching expression of claim 9 by reciting that the context element comprises a structure scope constraining expression containing one or more instructions of the form pattern:replacement, each specifying a particular replacement from one of the augmentation files to be implemented upon detection of the corresponding pattern. The Examiner relies on the teachings in Li at column 4, line 50, to column 5, line 62. See the final

Office Action at page 10, section 26. However, this portion of Li refers to a multi-resolution representation hierarchy 280, and not to a particular pattern matching expression having instructions of the particular form recited in the claim language. Accordingly, the collective teachings of McCauley and Li fail to meet the limitations of dependent claim 10.

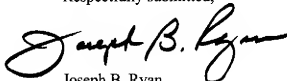
Claim 11

Dependent claim 11 is believed allowable at least by virtue of its dependence from claims 1 and 9, for the reasons identified above. The Li reference fails to supplement the fundamental deficiencies of McCauley as applied to claims 1 and 9.

Claim 11 further recites that the precedence element of the pattern matching expression of claim 9 specifies an order of application of the instructions associated with the context element. The Examiner again relies on the teachings in Li at column 4, line 50, to column 5, line 62. See the final Office Action at page 10, section 26. Appellants respectfully submit that the multi-resolution representation hierarchy 280 referred to in the relied-upon portion of Li does not teach or suggest a pattern matching expression having a precedence element which specifies an application order for instructions of a context element. Accordingly, the collective teachings of McCauley and Li fail to meet the limitations of dependent claim 11.

In view of the above, Appellant believes that claims 1-7 and 8-20 are in condition for allowance, and respectfully requests the withdrawal of the §102(e) and §103(a) rejections.

Respectfully submitted,



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CLAIMS APPENDIX

1. An apparatus for use in a computer network, the apparatus comprising:

at least one server within the network, the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device;

wherein the server parses the retrieved web content into one or more component structures, and subsequently applies a pattern matching process to recognize designated component structure subject to alteration in accordance with the one or more augmentation files; and

wherein the pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

2. The apparatus of claim 1 wherein the client device comprises at least one of a computer, a personal digital assistant, a wireless telephone and a voice browser-equipped device.

3. The apparatus of claim 1 wherein the web content is at least partially in at least one of an HTML format and an XML format.

4. The apparatus of claim 1 wherein one or more of the augmentation files are co-located with the web content at a site remote from the server.

5. The apparatus of claim 1 wherein at least one of the augmentation files comprises a patch file.

6. The apparatus of claim 1 wherein the server comprises an interpolating web proxy server configured between a device associated with the client and another server which provides the web content identified in the client request.

7. The apparatus of claim 1 wherein the server determines the client type using at least one of an HTTP header element, a client-identifying cookie, and an HTTP GET request QUERY_STRING attribute.

8. (Canceled)

9. The apparatus of claim 1 wherein the pattern matching process utilizes a pattern matching expression comprising context, pattern, precedence and replacement elements.

10. The apparatus of claim 9 wherein the context element comprises a structure scope constraining expression containing one or more instructions of the form pattern:replacement, each

specifying a particular replacement from one of the augmentation files to be implemented upon detection of the corresponding pattern.

11. The apparatus of claim 9 wherein the precedence element specifies an order of application of the instructions associated with the context element.

12. The apparatus of claim 1 wherein the received client request is associated with a plurality of different client devices, and the retrieved augmentation files comprise one or more augmentation files for each of the plurality of different client devices.

13. An apparatus for use in a computer network, the apparatus comprising:
at least one server within the network, the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device;

wherein the client device comprises a virtual client device having a combination of a plurality of different sets of features provided by multiple distinct physical client devices.

14. An apparatus for use in a computer network, the apparatus comprising:

at least one server within the network, the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device;

wherein the server processes the client requests such that the request appears to originate from a virtual client device having a combination of a plurality of different sets of features provided by multiple distinct physical client devices.

15. The apparatus of claim 1 wherein at least one of the augmentation files comprises an externally-retrievable augmentation file retrievable from another server external to the at least one server and having at least a portion of the web content associated therewith.

16. An apparatus for use in a computer network, the apparatus comprising:

at least one server within the network, the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device;

wherein at least one of the augmentation files comprises a default augmentation file stored on the at least one server.

17. An apparatus for use in a computer network, the apparatus comprising:

at least one server within the network, the server being operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request, to retrieve one or more augmentation files associated with at least one of the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device;

wherein the server has access to a set of one or more default augmentation files, and the server is operative to attempt to retrieve a given one of the default augmentation files for use in altering the retrieved web content if the corresponding client request is determined to have no externally-retrievable augmentation files associated therewith.

18. A method for use in a computer network, the method comprising the steps of:

processing a client request generated by a client device to determine a particular client type associated with the client device;

retrieving web content identified in the client request;

retrieving one or more augmentation files associated with the web content and the particular client type; and

altering the retrieved web content in accordance with the one or more augmentation files;

wherein the altered web content is delivered to the client device;

wherein the retrieved web content is parsed into one or more component structures, and a pattern matching process is subsequently applied to recognize designated component structure subject to alteration in accordance with the one or more augmentation files; and

wherein the pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

19. A machine-readable medium for storing one or more programs for use in a computer network, wherein the one or more programs when executed by a processing system carry out the steps of:

processing a client request generated by a client device to determine a particular client type associated with the client device;

retrieving web content identified in the client request;

retrieving one or more augmentation files associated with the web content and the particular client type; and

altering the retrieved web content in accordance with the one or more augmentation files;

wherein the altered web content is delivered to the client device;

wherein the retrieved web content is parsed into one or more component structures, and a pattern matching process is subsequently applied to recognize designated component structure subject to alteration in accordance with the one or more augmentation files; and

wherein the pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

20. A processing system comprising:

a web server operative to store web content; and

an interpolating proxy server at least temporarily coupled to the web server and operative to process a client request generated by a client device to determine a particular client type associated with the client device, to retrieve web content identified in the client request and stored on the web server, to retrieve one or more augmentation files associated with the web content and the particular client type, and to alter the retrieved web content in accordance with the one or more augmentation files, wherein the altered web content is delivered to the client device;

the interpolating proxy server being further operative to parse the retrieved web content into one or more component structures, and subsequently to apply a pattern matching process to recognize designated component structure subject to alteration in accordance with the one or more augmentation files;

wherein the pattern matching process comprises comparing a given one of the component structures of the retrieved web content to predetermined component structures represented by respective tokens in the one or more augmentation files.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None